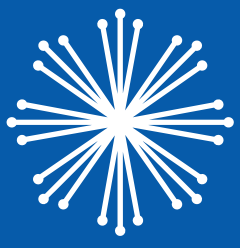
Bruce Power

2024 Green Bond Report





Contents

This Green Bond Report covers the reporting period of the second quarter of 2024 through the first quarter of 2025.

The report includes information on new issuances during the reporting period and information on the allocation and impact of all green bond proceeds through the first quarter 2025.

In December 2024, Bruce Power L.P. issued the following private placement green bonds in accordance with Bruce Power's Green Financing Framework:

$600 million of 4.27% Senior Unsecured Notes due December 21, 2034 (ISIN no CA116705AQ79)

The net proceeds of the green bond offering were allocated in full to the Unit 3 Major Component Replacement Project, the Unit 4 Major Component Replacement Project, the Unit 5 Major Component Replacement Project, the Unit 7 Major Component Replacement Project and the Unit 8 Major Component Replacement Project, which are Eligible Investments described in Bruce Power's Green Financing Framework. Under this framework, proceeds from green bonds issued can be used for eligible projects in the following areas: Clean Energy: Nuclear and Pollution Prevention and Control. These projects focus on extending the life of the nuclear generation facility, to enable Bruce Power to provide clean, reliable power for decades to come, while displacing millions of tonnes of emissions from carbon-emitting electricity generators.

Company *Overview*

Bruce Power is Canada's only private-sector nuclear generator, annually producing approximately 30 per cent of Ontario's power. Established in 2001, Bruce Power is a Canadian-owned partnership indirectly owned by TC Energy, Ontario Municipal Employees Retirement System (OMERS), the Power Workers' Union, The Society of United Professionals and the Bruce Power Employee Investment Trust.

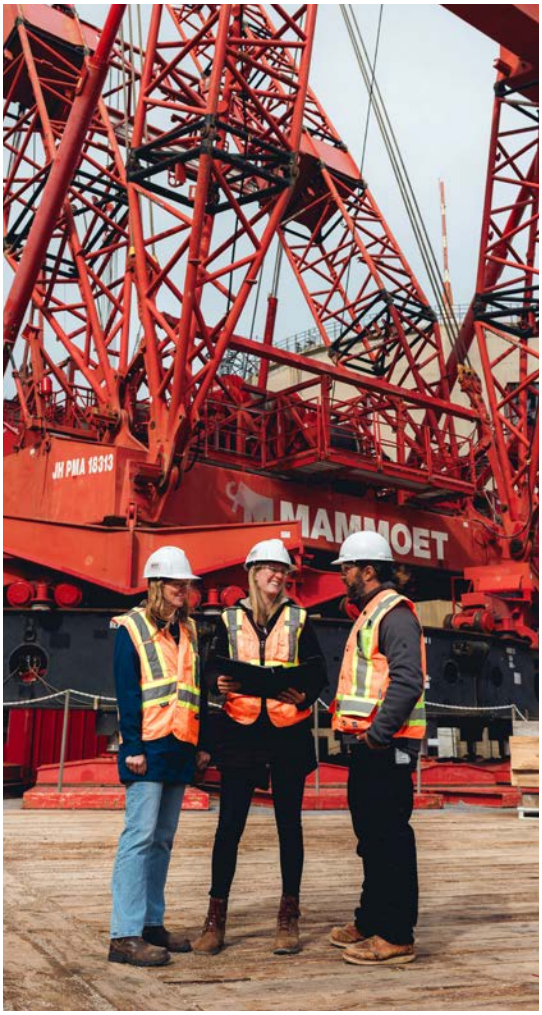
The Bruce Power site is located within the Saugeen Ojibway Nation Territory, the shared treaty and traditional Territory of the Chippewas of Saugeen First Nation and Chippewas of Nawash Unceded First Nation (Neyaashiinigmiing).

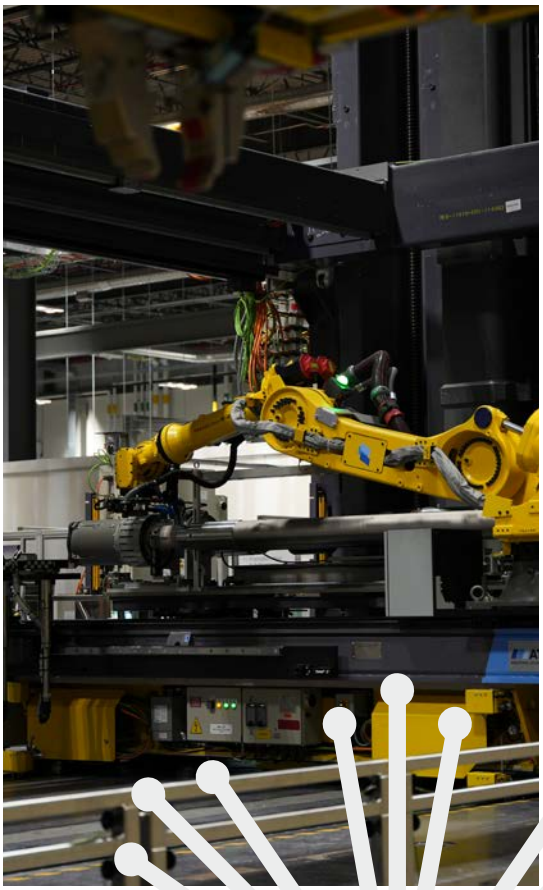
Bruce Power is dedicated to honouring Indigenous history and culture and is committed to moving forward in the spirit of reconciliation and respect with the Indigenous communities we work with. We are committed to strong and respectful relationships with the Saugeen Ojibway Nation (SON), the Métis Nation of Ontario (Region 7) and Historic Saugeen Métis.

As Ontario's largest electricity generating facility, Bruce Power's Life-Extension Program will play a key role in supporting growing electricity needs of the province by extending the operation of its eight units to continue to produce clean energy and cancer-fighting isotopes through 2064 and beyond. Bruce Power's Life-Extension Program is currently underway, consisting of the Major Component Replacement (MCR) Project and the Asset Management Plan. The MCR Project focuses on the replacement of key reactor components in Units 3-8. The life extension of each unit will add 30 to 35 years of operational life, through the year 2064. The Asset Management Plan involves inspections and the gradual replacement of equipment which is performed during regularly scheduled maintenance outages.

Bruce Power's ongoing operations support 22,000 direct and indirect jobs, with an additional 5,000 jobs annually throughout the MCR program. Bruce Power is supported by a supply chain that provides approximately 95% of local spending based in Ontario and Canada, and made-in-Canada CANDU technology utilizes uranium mined and processed in Canada in support of our country's long-term energy security.

In addition to Life-Extension playing a key role in supporting Ontario's growing





electricity needs, Bruce Power is investing in increasing the output from its existing reactors. Project 2030 focuses on asset optimization, innovation, and leveraging new technology to increase the eight unit peak capacity at Bruce Power. With the completion of these upgrades, the site will have the capacity to produce over 7,000 megawatts; the additional output will be roughly the equivalent of adding another large-scale reactor to the Bruce Power site simply using current infrastructure.

Bruce Power also plays a prominent role in Canada's position as a global leader in the production of medical isotopes. Bruce Power has been a key part of the global isotope supply chain for almost 40 years, beginning with the production of cobalt-60, which is used to sterilize medical equipment and treat cancer around the world.

Bruce Power's Isotope Production System, installed on Unit 7 in 2022 with incremental production capacity upgrades in 2024, made Bruce Power the first commercial nuclear generator to produce lutetium-177, a cancer-fighting medical isotope used in precision oncology for targeted therapy of a growing number of cancers, including neuroendocrine tumours and prostate cancer.

Ontario *electricity generation* by fuel type

NUCLEAR

51%

BRUCE POWER NUCLEAR

Bruce Power generates over half of Ontario's nuclear energy generation (57% of Ontario's nuclear power generation)

29%

HYDRO

24%

WIND

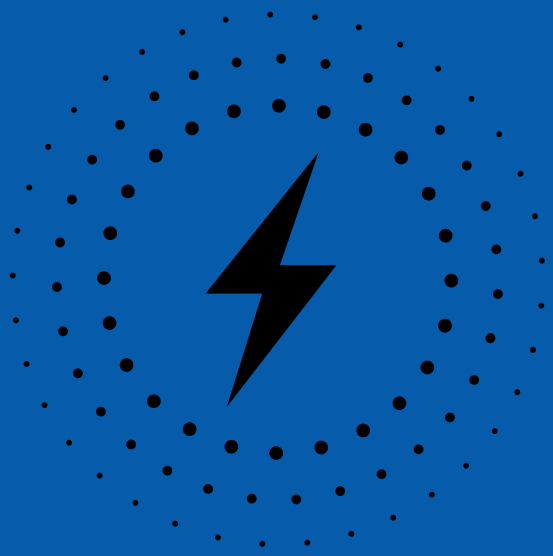
9%

GAS

16%

SOLAR 0.4% AND BIOFUEL 0.2%

<1%



%

BRUCE POWER OUTPUT 2024

5.80 TWh Unit 1

7.17 TWh Unit 2

0.00 MCR Unit 3

6.82 TWh Unit 4

6.70 TWh Unit 5

6.83 TWh Unit 6

5.92 TWh Unit 7

6.73 TWh Unit 8

Our Approach *to Sustainability*

To achieve Bruce Power's vision of powering the future, it takes an unwavering commitment to being a responsible steward for people, communities and the environment. The company's Sustainability Program has been developed using industry best practices and global standards, focusing on four key areas: Environment, People and Safety, Products and Services, and Community.

We aim to continuously improve performance and disclosure in each of these areas to exceed industry standards, increase transparency, and to address topics and issues that are most significant to interested parties.

The Sustainability Program is led by the Environment, Sustainability and Net Zero Division, which reports bi-annually to the Environment and Sustainability Oversight Committee. The Bruce Power Board of Directors (the Board) has oversight over the strategy and governance related to all Sustainability matters. This governance and oversight structure ensures the integration of sustainability-related risks and opportunities

based on Environmental, Social, and Governance (ESG) criteria, into the long-term business strategy and company performance.

Bruce Power is committed to maintaining transparency and accountability in our monitoring and reporting, and to implementing actions and initiatives that drive real, tangible benefits in the short-, medium-, and long-term.

To access Bruce Power's Sustainability Reports, please visit our website. Our 2025 Sustainability Report can be found here.

Our Sustainability Program Focuses on Four Key Areas:

1. Environment
2. People and Safety
3. Products and Services
4. Community

Net Zero 2027

Bruce Power continues to contribute to a net zero Canada by 2050 by committing to achieving net zero greenhouse gas (GHG) emissions from its site operations by 2027, making it the first nuclear operator in North America to make such an ambitious commitment.

While the company reliably produces a large quantity of clean energy that is critical to Ontario reducing GHG emissions, Bruce Power continues to make strides to minimize and offset emissions from routine undertakings such as vehicles, machinery, buildings, and equipment to achieve net zero by 2027.

Our Net Zero 2027 target accounts for all direct and indirect GHG emissions that occur from sources that are owned or controlled by the company (Scope 1 and Scope 2 emissions). To drive continued progress towards this Net Zero target, increasing emission-reduction targets were set against a 2019 baseline for the years leading up to 2027, from 2021 through 2027.

Our Net Zero 2027 Strategy outlines how emissions reduction targets will be achieved and our structured approach to supporting both Provincial and Federal climate change goals. This strategy includes reducing or avoiding GHG emitting sources through the optimization of building use on site, implementing energy and emission-reduction projects and initiatives in our operations, finding alternatives to high-emission energy sources and, where further reductions are not feasible, pursuing emission offsets and leveraging Clean Energy Credits through the Ontario Clean Energy Credit Program.

Bruce Power met GHG emissions reduction targets in 2024 and continues to work on the implementation of on-site operational initiatives as well as partnering with local carbon sequestration and offset projects to support further reductions.

Emission-reduction projects currently underway to increase efficiencies in our on-site operations, buildings, and fleet include:

- Site building-use optimization and decommissioning of buildings that are no longer required to reduce space heating and energy demands.
- Switching building heating systems to more efficient heating sources, including substitution from transported steam (which endures significant line losses) to more efficient natural gas combustion on site.
- Continued reduction in fuel consumption by optimizing the duration and frequency of standby generator safety system tests.
- Assessing opportunities for fleet electric vehicle (EV) upgrades and fleet use optimization strategies, including fleet size reduction, vehicle sharing, and anti-idling strategies.

- Exploring opportunities for renewable diesel use in fleet vehicles.
- Increasing EV charging on site for fleet and employee use, with a current capacity to charge 36 vehicles.
- Upgrading interior and exterior lighting to LED.
- Integrating Building Automation Systems (BAS) into buildings allowing temperature to be monitored and adjusted remotely based on occupancy timing and requirements.
- Evaluating additional metering opportunities in buildings to measure usage and identify reduction opportunities.
- Building temperature setpoint optimization to reduce energy use while maintaining acceptable occupant comfort.
- Regular inspection and maintenance of refrigeration equipment to reduce leaks of halocarbons.
- Major HVAC replacement projects using refrigerants with lower global warming potentials and zero ozone depletion potential.

Alternative Land Use Services (ALUS)

Farmer-Delivered, Nature-Based Climate Solutions

To further progress towards emission-reduction goals, Bruce Power is a proud sponsor and partner on the ALUS New Acre Project, and 2024 marks the third and final year of this partnership, in collaboration with the Nuclear Innovation Institute (NII). This nature-based carbon offset initiative, funded by Bruce Power's Carbon Offset Accelerator Fund, focuses on carbon sequestration opportunities and the protection and enhancement of local ecosystems through nature-based projects on agricultural land in Bruce and Grey Counties. The New Acre Project identified additional acres of nature-based solutions for implementation each year over the three-year partnership (2022–2024), totaling 600 acres. While the partnership ran for three years, it is worth noting that each project has a five-year agreement, that requires participants to manage and maintain these projects over that duration, ensuring that these acres will provide environmental benefits for at least five years.

A total of 27 participants enrolled projects in 2024, bringing the three-year total to 63 participants, and pushing the total project area to 600 acres fulfilling the three-year target set for the program. Preliminary estimates for the 2024 projects suggest a carbon dioxide reduction of 2,551 tonnes over five years, subject to final site visits and satellite reviews in 2025, bringing the total carbon sequestered over the course of the investment to 6,577 tCO_2e over five years.

This ongoing initiative demonstrates a strong commitment to nature-based emission-reduction solutions, enabling local farmers to actively contribute to carbon sequestration efforts and the enhancement of local ecosystems while making use of their marginalized and unused farmland.

Green Financing *Framework Overview*

The Green Financing Framework (the Framework) applies to Green Financings issued by Bruce Power and sets out the guidelines for Bruce Power's Green Financing issuances in accordance with the Green Bond Principles issued by the International Capital Markets Association (ICMA) as well as the Green Loan Principles issued by the Loan Market Association (LMA) and Loan Syndications and Trading Association (LSTA) and the Asia Pacific Loan Market Association (APLMA).

In November 2023, Bruce Power updated its Green Financing Framework. Green financing instruments issued after November 2023 will be guided by the updated Framework, which includes investments in new nuclear installations as eligible green expenditure. The updated Framework received a Second Party Opinion from S&P Global Ratings, a leading provider of second party opinions on green financings, under the Shades of Green analytical approach, formerly part of CICERO. S&P Global Ratings assessed the Framework as 'Medium Green' on a scale of Light, Medium and Dark. S&P Global Ratings indicated that the Framework is Aligned with the Green Bond Principles and the Green Loan Principles.

Key highlights of the Framework follow

1. Use of Proceeds	Development, operation and refurbishment of new and existing nuclear projects which may include: • Bruce Power's Life-Extension Program, which includes the MCR Program and the Asset Management Plan as described in the Company Overview • Investments related to increasing the output of existing Bruce Power units while maintaining or improving the level of operational safety of such units, such as Project 2030 • Investments in new installations to produce electricity that displace other emitting electricity sector generators
2. Process for Project Evaluation and Selection	• Dedicated Environment and Sustainability Oversight Committee • Proceeds allocated and managed based on the process described in the Green Financing Framework • Ongoing review of Eligible Investments to ensure compliance with Eligibility Criteria
3. Management of Proceeds	• Value of allocated funds to the financing or refinancing of existing or future Green Investments is equal to the net proceeds from the issuance of each Green Financing • Full allocation of Green Financing to be made within 36 months from the date of issuance • Pending allocation, proceeds may be temporarily invested in cash or short-term investment instruments that do not include GHG-intensive projects
4. Reporting	• Allocation of funds and associated impacts published on an annual basis • Finance reporting will include a summary of outstanding Green Financings, allocations to Green Investments on a project-by-project basis where possible, and project updates • Impact reporting to include, where feasible, qualitative and/or quantitative environmental performance at a project level including estimated annual GHG emissions reduced or avoided, methodology disclosure for calculations, and annual nuclear energy generation
5. External Review	• Opinion by a Second-Party Opinion provider, that confirms the Framework is credible and impactful, available on Bruce Power's website • Report from an independent accounting firm attesting to management's assertion of the allocation of bond proceeds to eligible projects, available on Bruce Power's website

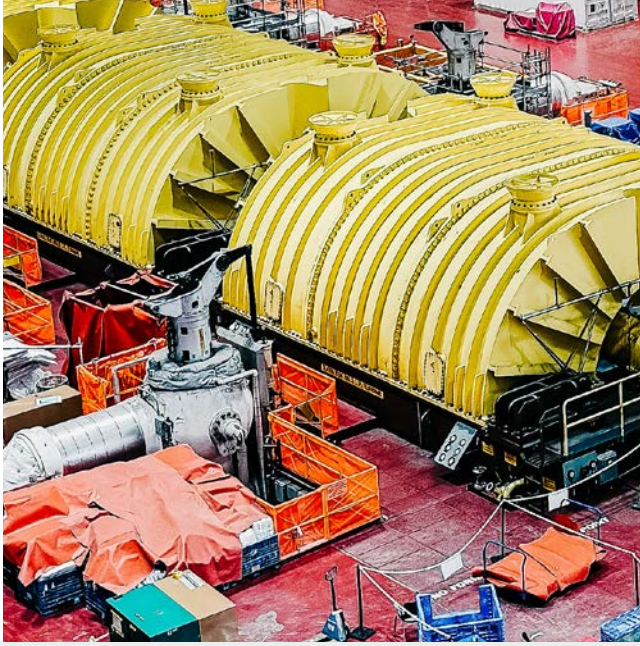
For further detail please see:

Green Bond Framework: https://www.brucepower.com/publications/2023-green-financing-framework/

Green Bond Framework Second Party Opinion report: https://www.spglobal.com/_assets/documents/ratings/research/101589818.pdf

International Capital Markets Association, *"The Green Bond Principles (GBP) 2021"*, published June 2021. https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/green-bond-principles-gbp/

Loan Syndications & Trading Association and Loan Market Association, *"Green Loan Principles"*, published in March 2025. Green Loan Principles - LSTA. https://www.lsta.org/content/green-loan-principles/



Green Bond Issuances and Allocation

Below are the details of Bruce Power's green bond issuances and allocation to the portfolio of outstanding Eligible Green Investments. All amounts are in millions Canadian dollars unless otherwise stated.

Issuer	Series No.	Size	Coupon	Issuance Date	Maturity Date	Net Proceeds
Bruce Power LP	2021-1	$500	2.68%	November 18, 2021	December 21, 2028	$496.8
Bruce Power LP	2023-1	$300	4.70%	March 21, 2023	December 21, 2027	$298.3
Bruce Power LP	2023-2	$300	4.99%	March 21, 2023	December 21, 2032	$298.0
Bruce Power LP	2024-1	$600	4.70%	March 12, 2024	June 21, 2031	$595.2
Bruce Power LP	2024-2	$600	4.27%	December 12, 2024	December 21, 2034	$596.1
Total		**$2,300**				**$2,284.4**

Allocation to Eligible Investments	
Unit 3 Major Component Replacement Project	$639.3
Unit 4 Major Component Replacement Project	$153.0
Unit 5 Major Component Replacement Project	$125.2
Unit 6 Major Component Replacement Project	$1,204.6
Unit 7 Major Component Replacement Project	$26.8
Unit 8 Major Component Replacement Project	$12.9
Project 2030 — Power Recovery	$122.6
	$2,284.4
Remaining Unallocated Proceeds	**$0.0**

Green Bond Impact Summary

Net proceeds from Bruce Power's Green Bond issuances were allocated to the Unit 3 MCR Project, Unit 4 MCR Project, Unit 5 MCR Project, the Unit 6 MCR Project, Unit 7 MCR Project, Unit 8 MCR Project and the Project 2030 — Power Recovery.

These projects are duly approved by the Environment and Sustainability Oversight Committee as Eligible Investments under Bruce Power's Green Financing Framework.

Green Bond funding allocations and estimated avoided carbon dioxide equivalent (CO_2e) emissions for the MCR Projects are as follows.

Project	Allocation	Estimated Energy Production	Estimated Annual Avoided Emissions*	Benefit Realization
Unit 3 Major Component Replacement	$639.3 million	5.9 TWh estimated average annual output post MCR	2,651,839 tCO_2e	Expected return to service date is end of 2026
Unit 4 Major Component Replacement	$153.0 million	5.9 TWh estimated average annual output post MCR	2,653,407 tCO_2e	Expected return to service date is end of 2027
Unit 5 Major Component Replacement	$125.2 million	6.3 TWh estimated average annual output post MCR	2,839,566 tCO_2e	Expected return to service date is mid-2029
Unit 6 Major Component Replacement	$1,204.6 million	6.4 TWh estimated average annual output post MCR	2,858,677 tCO_2e	Returned to service September 2023
Unit 7 Major Component Replacement	$26.8 million	6.3 TWh estimated average annual output post MCR	2,833,717 tCO_2e	Expected return to service date is mid-2031
Unit 8 Major Component Replacement	$12.9 million	6.3 TWh estimated average annual output post MCR	2,849,438 tCO_2e	Expected return to service date is mid-2033

* The calculation method for Estimated Annual Avoided Emissions is provided at the end of this report.

Green Bond funding issuance and estimated non-carbon emitting energy production for Project 2030 are as follows.

Project	Allocation	Estimated Non-Carbon Emitting Energy Production	Benefit Realization
Project 2030	$122.6 million	0.6 TWh estimated annual incremental output from 2021 to 2064	Target expected peak of incremental gains is in early 2030's

*The calculation method for Estimated Non-Carbon Emitting Energy Production is provided at the end of this report.

Bruce Power's *Major Component* Replacement

Bruce Power's Life-Extension Program, Ontario's largest private sector clean energy infrastructure project, consists of Major Component Replacement (MCR) Projects in Units 3-8 and lifetime Asset Management Plan that will extend the life of the site until 2064. The life extension of the reactor units will secure decades of reliable, low carbon emitting energy for the people of Ontario at a time that the Independent Electricity System Operator (IESO) forecasts demand to be steadily rising.

The MCR Projects focus on the removal and replacement of large nuclear components such as the fuel channels in the core of the reactor, feeder tubes, and the steam generators. During this multi-year campaign, upgrades are also made to electrical, cooling water, turbines, and safety systems, among others.

The Unit 6 MCR Project began in 2020 and was completed ahead of schedule and on budget. Unit 6 was returned to service in September 2023.

Unit 3 MCR began on March 1, 2023, following successful planning and preparation work. The removal series of work on Unit 3 was completed in August 2024, ahead of schedule and outperforming the same work completed in Unit 6 by leveraging the experience of tradespeople and innovation through lessons learned in Unit 6 and technological advancement. The installation series of work is currently underway, with project completion and return to service expected in late 2026.

Unit 4 MCR began with breaker open on January 31, 2025 following successful planning and preparation work. The unit was successfully defueled, and the project has moved into preparation of the removal series which is expected to begin later this year.

The lifetime Asset Management Plan and MCR remain on plan. Unit 3 is expected to return to service in late 2026, Unit 4 MCR is to return to service in late 2027, with Units 5, 7 and 8 MCRs to follow with planning and pre-work well underway. Bruce Power's MCR program is expected to conclude in 2033.

Bruce Power and Ontario Power Generation continue to collaborate and benchmark their MCR projects, setting a worldwide standard for nuclear refurbishment.

MCR Activities

Bruce Power's MCR projects follow a similar approach. The following activities are completed during an MCR project.

LEAD IN

Station teams disconnect the unit from the grid, start the cooldown process, and defuel the reactor. Once the fuel is removed, the Major Component Replacement (MCR) team access to the vault to begin installing bulkheads that isolate the reactor from all other operating units in the station.

CRITICAL WORK:

- Defuel 5,760 fuel bundles from reactor
- Bulkhead and shielding installation

REMOVAL SERIES

The removal series of work dismantles the reactor starting with the removal of upper and lower feeders.

CRITICAL WORK:

- Upper and lower feeder tubes removed
- End fittings and pressure tubes removed
- Calandria tubes removed

INSPECTION SERIES

Inspection work is completed to ensure the reactor is ready for the installation of new components. Work is completed to prepare the vault for new component installation.

CRITICAL WORK:

- Calandria vessel inspection
- Tubesheet bore inspection and lattice tube cleaning

INSTALLATION SERIES

New vault components are installed in the reactor including 960 feeder tubes, 480 fuel channels, and 480 calandria tubes.

CRITICAL WORK:

- Upper feeder tube installation
- Calandria tube installation
- Fuel channel assembly installation
- Lower feeder installation

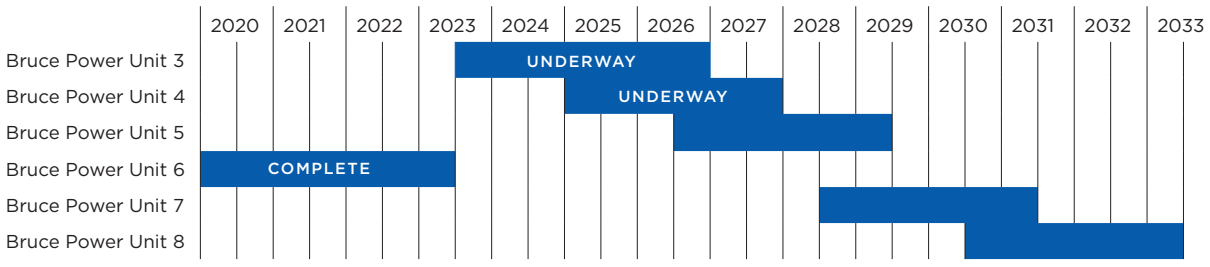
LEAD OUT

System, structures and component checks to meet performance and license requirements to return the unit to full power will be completed prior to full return of the unit to commercial operation.

CRITICAL WORK:

- New fuel load
- Remove bulkheads and shielding
- Low power testing and turbine run-up
- Sync to grid
- Full reactor power and testing complete

RETURN TO SERVICE



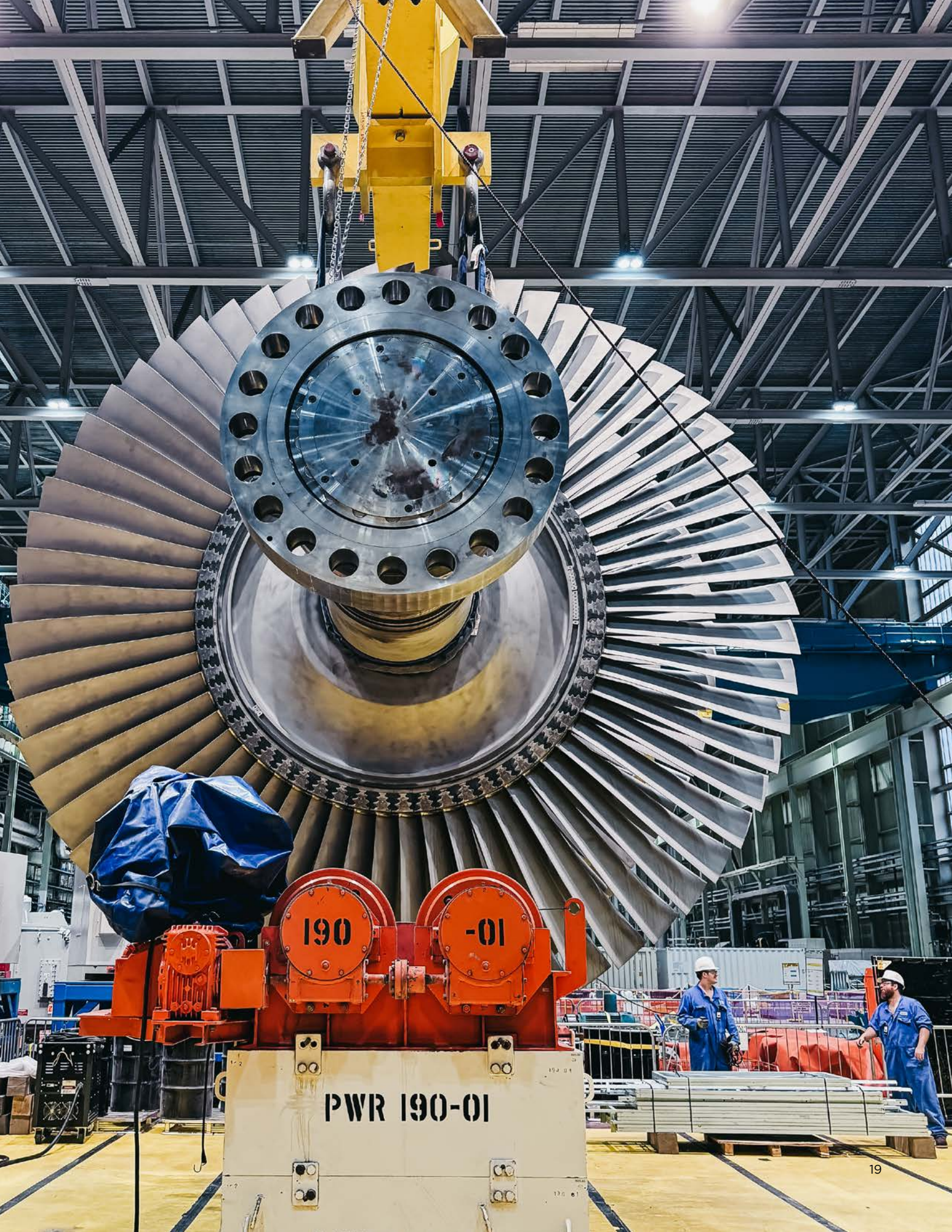
Project 2030

In October of 2021, Bruce Power announced Project 2030, which is the company's goal of achieving a site net peak capacity of 7,000 MW by the early 2030s in support of Ontario's climate change targets and future clean energy needs.

Project 2030 focuses on continued asset optimization, innovations, and leveraging new technology, which could include integration with storage and other forms of energy, to increase the eight-unit peak capacity at Bruce Power. This additional generation will be achieved through of series of projects, and the increase to Bruce Power's generation will be approximately equivalent to adding about a ninth large-scale reactor to our site without the need to build new infrastructure.

Project 2030 implemented the following scope during the reporting period:

- Data reconciliation was implemented in Units 2, 5, 6 and 7 to improve the accuracy of reactor power calibration and in turn, improve unit megawatt (MW) output.
- Unit 5 and 7 reactor inlet header temperatures were reduced by cleaning the Preheaters, permitting recovery of operating margin and related MW.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Greenhouse Gas Avoidance *Calculation Methodology*

For the GHG avoidance calculations in this report related to Bruce Power MCR Projects, the carbon impact of electricity supply projects is estimated by determining the difference in GHG emissions between the project and the sources of electricity that the project activity displaces (i.e., avoided emissions).

The quantification of GHG avoidance resulting from the following Bruce Power MCR Projects considers the forecasted average annual output of the units at the completion of the MCR projects for Unit 3, 4, 5, 6, 7 and 8.

As Unit 6 was returned to service at the end of 2023, forecasted annual average output of the unit from 2024 forward is used.

In our avoided emissions calculation, we compare the annual output associated with nuclear, i.e., output resulting in zero direct emissions with the amount of GHG emissions that would result from the same power output being provided from natural gas electricity generation. For the purposes of the calculations in this report, we assume the system remains static with the current supply/demand stated in the IESO forecast, that increase in electricity demand is met by natural gas electricity generation, and that no change in current electricity generation supply mix occurs.

Using 2022 data taken from the Government of Canada's National Inventory Report (NIR) 1990-2022 (2024), the greenhouse gas intensity of electricity generated from natural gas in Ontario has been calculated as 449.38 g CO_2e/kWh. Every kilowatt hour (kWh) of electricity generated from carbon-free sources, such as nuclear, avoids 449.38 grams (g) of carbon dioxide equivilants (CO_2e) compared to electricity generated in Ontario from natural gas. It is of note that the NIR data represents direct emissions from the generation plant only and does not include wider lifecycle emissions, such as extraction, processing, and fuel transport, which results in inherently higher generation intensity values. Data is sourced to use the most recent data available in our

calculations for avoided emission projections, recognizing that natural gas electricity generation emissions intensity fluctuates year over year. The estimated average annual outputs of each of the Units included in this report at the completion of MCR Projects (TWh) is then multiplied by the GHG intensity of natural gas electricity generation (g CO_2e/kWh) to determine the annual amount of greenhouse gas emissions avoided as the result of the investment in the Life Extension of these units via the MCR Projects:

- Unit 3 MCR - 2,651,839 tCO_2e per year
- Unit 4 MCR - 2,653,407 tCO_2e per year
- Unit 5 MCR - 2,839,566 tCO_2e per year
- Unit 6 MCR - 2,858,677 tCO_2e per year
- Unit 7 MCR - 2,833,717 tCO_2e per year
- Unit 8 MCR - 2,849,438 tCO_2e per year

For clarity, the estimated amount of emissions reduced/avoided represents the total amount displaced by Eligible Project, and not the proportionate amount financed by green bonds.

Electricity Generation and GHG Emissions for Ontario, 2022

	GHG Emissions (kt CO_2e)*	Electricity Generation (GWh)	Generation Intensity (g CO_2e per kWh electricity generated)
Natural Gas	5,060	11,260	449.38
Nuclear	0	78,800	0

Source: Government of Canada, "National Inventory Report 1990-2022: Greenhouse Gas Sources and Sinks in Canada", published 2024. https://publications.gc.ca/site/eng/9.506002/publication.html

*Data represents emissions from on-site combustion of fuel directly related to electricity generation

Non-Carbon Emitting *Energy Production Calculation* Methodology

A separate calculation is performed to determine the annual amount of non-carbon emitting energy produced resulting from the investment in power recovery projects related to Project 2030. The calculation considers the average annual incremental output from related power recovery projects, an average incremental gain of 0.6 terawatt hours (TWh) per year from 2021 through to 2064. Note that incremental gains were also achieved starting in 2018; however, for the purpose of calculations the boundary was set at 2021 through to 2064.

The annual amount of non-carbon emitting energy produced by Project 2030 considers zero direct carbon emissions from the generation plant only and does not include operational Scope 1 and 2 greenhouse gas emissions, or wider lifecycle greenhouse gas emissions.

Bruce Power

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CS250255A R000 JUN2025